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The Allocation of Construction Work and Projects to Individual Ministries Supervising the Construction Industry

General

The construction enterprises are regarded as the third alternate factor in the realization of investments. The first factor -- the investor was described in the of this series of reports, the second -- the designing and consulting bureaus will be described later. This part describes the allocation of construction tasks -- investments and capital repairs -- to the individual ministries which supervise the construction-assembly enterprises. It is a complicated problem since several thousand investment projects* have to be distributed every year between some 650 state construction-assembly enterprises, and also because the system does not permit the investor to select the contractors because they are centrally assigned by the State Economic Planning Commission (PKPG).

The allocation of construction works and projects is based on the investment plan and Capital Repairs Plan which must be prepared by PKPG on the basis of the investment and capital repairs plans submitted by individual ministries. This must be done in a short time, in practice during November and December of every year, in order to give every construction enterprise the plan of its construction work for the next year from 1st January.

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*/ A total of about 10,000 investment projects, about 3000 of them are centrally controlled by PKPG and they use about 80% of the total investment outlays. The remaining 7000 are allocated to individual ministries with necessary funds in bulk.)

A. Balance Sheet of Tasks and Productive Capacity

The productive capacity of the construction industry is strictly controlled by the state as are other economic means and stocks, i.e., the government allocates the construction-assembly enterprise like other components such as money, foreign currency for import, materials, machinery, building lots and grounds.

The allocation of contractors is conducted according to the Construction Plan (Plan Budownictwa) derived from the Investment Plan. The Construction Plan pertains only to a part of the Investment Plan which is called Construction-Assembly Projects of the Investment Plan (Roboty Budowlano-Montazowe Planu Inwestycyjnego) and embraces new construction and capital repairs.

The planning of the construction industry production is conducted by a balance sheet method, i.e., on the basis of the initial estimates of the planned investments for the given year, the needed construction work is expressed in zlotys (the number of workers needed multiplied by their yearly output) and in addition, in physical units, i.e., rooms, cubature, kilometers for roads, etc.) and compared with the existing productive capacity of all construction-assembly establishments. The productive capacity embraces organization, technical personnel, workers, machinery, equipment, depots and facilities including investments for the construction industry itself.

The preparation of the balance sheets is facilitated by the methods of integrated coefficients (wskazniki scalone) and classification of construction work.

The integrated coefficients (wskazniki scalone) define: the quantity of man-hours and quantity of the more important materials needed for one million zlotys of any type of investment, e.g., it is known from experience and calculation how much bricks, cement, lime, cables, pipes and other materials are necessary for the construction of an electric power plant for one million zlotys. It is also known how ~~much~~ many manhours of construction workers, mechanics and assembly workers are needed for one million zloty of the constructed power plant. The same is true for chemical plants, steelworks, machine industry, textile industry, agricultural food stuff industry, cement industry, factories, etc.

The integrated coefficients for one million zlotys of housing construction, for the construction of schools, hospitals, highways, railways, high tension transmission lines, gas, water installations and all other various works are (known also) exactly.

On the other hand the yearly output of one worker in the basic production e.g., in industrial construction 83,000 zlotys, in housing construction 75,000, in industrial assembly work 95,000, in drainage and agricultural soil improvement work 48,000 zlotys, are also known. In this way it is possible very quickly to

prepare a statement of the investment needs on the basis of the comprehensive coefficients and to compare them with the productive capacity of the existing construction-assembly enterprises. This method of coefficients was developed in Polish construction industry planning during the last few years to a high level, and the preparation of balance sheets statements of the investments tasks and productive capacity is done quickly and with sufficient accuracy.

B. Classification of Construction Works and Ministries Responsible for the Implementation of Investment Projects

In the official statistics, the construction-assembly enterprises are divided as follows(See Polish Statistical Yearbook 1957page 199):

| | |
|---|---|
| Socialized construction-assembly enterprises in 1956 | |
| Total number | 644 |
| Among them: General Construction Enterprises | 391 |
| From them housing construction enterprises | 265 |
| Special construction Enterprises | 183 |
| from them: industrial construction enterprises | 78 |
| engineering " " | 57 |
| Assembly establishments | 33 |

The above division of the construction-assembly enterprises and establishments however is insufficient for the allocation of construction works, and for this reason much more detailed and specific classification are used in planning.

The construction-assembly works are divided from the point of view of allocation of individual works and investment projects into eight groups:

I. General construction works

II. Industrial construction

III. Engineering construction

IV. Communications, long distance supply nets

V. Land improvement for agriculture

VI. Construction of mines and shafts

VII. Geological and geodetic work

VIII. Capital Repairs

The following remarks should be made concerning this division:

a/ Groups I to VI are divided according to the technical characteristic of the constructed project;

b/ Group VII is included in the construction plan for some unknown reason, anyway only surveys of grounds necessary for the constructions are taken in consideration;

c/ Group VIII capital repairs are included in one comprehensive group in order to simplify the planning and they are not divided between the above listed six categories of construction investment. These eight groups are further divided into 27 categories of separate projects and construction works, and one of the ministries or central governmental offices is assigned as responsible for each of them as follows:

Breakdown of Classification of Construction-Assembly Projects and Responsibility

| Category of Projects and Works | Ministry responsible for the implementation |
|---|---|
| I. GENERAL CONSTRUCTION WORKS | |
| 1. Housing construction | Ministry of Construction and Building Materials Industry |
| 2. General construction (schools, hospitals, offices, shops, etc.) | " " " |
| 3. Rural homestead construction | A net of local enterprises subordinated administratively to local peoples councils and for technical supervision to the Ministry of Construction |
| II. INDUSTRIAL CONSTRUCTION | Ministry of Construction |
| 4. Factories, plants | |
| III. ENGINEERING CONSTRUCTION | |
| CIVIL ENGINEERING | |
| 5. Roads and Bridges | Ministry of Transportation |
| 6. Railroads including electrification | " " " |
| 7. Airfields, civil and military | Ministry of Construction |
| HYDRO ENGINEERING | |
| 8. Strengthening of sea-shores and port facilities | Ministry of Construction |
| 9. Dredging and construction at sea | Ministry of Shipping and Water Economy |
| 10. Regulation of rivers | " " " |
| 11. Dams, canals, and water reservoirs | Ministry of Construction |

| Category of Projects and Works | Ministry Responsible for Implementation |
|---|---|
| COMMUNAL | |
| 12. Long distance water supply lines | Ministry of Construction |
| 13. Urban water and sewer systems, streets, equipment of streets, streetcars | Ministry of Communal Economy |
| IV. COMMUNICATION & SUPPLY NETS | |
| 14. High tension electric lines Long distance gas and crude oil pipelines | Ministry of Mining and Electric Power |
| 15. Low tension electric lines for light including electrification of rural areas | " " " |
| 16. Communication lines, telegraph, telephone, telecommunication | Ministry of Communication |
| Buildings, stations for radio and television, and masts | " " " |
| V. LAND IMPROVEMENT FOR AGRICULTURE | |
| 17. Drainage, irrigation | Ministry of Agriculture |
| VI. CONSTRUCTION OF MINES AND SHAFTS | |
| 18. Coal mines | Ministry of Mining |
| 19. Metal ores mines | Ministry of Heavy Industry |
| 20. Sulphur, salt mines, apatite and other chemical minerals | Ministry of Chemical Industry |
| 21. Open pit mines for construction materials | Ministry of Construction |
| 22. Test and exploitation drillings for oil | Central Petroleum Office |

| Category of Projects and Works | Ministry Responsible for Implementation |
|---|---|
| VII. GEOLOGICAL AND GEODETIC WORKS | |
| 23. Geological drillings | Each ministry through its own geological service under technical supervision of the Central Administration of Geology |
| 24. Surveys of construction grounds and measurements during the construction (the plan does not include geodetic surveys of the country, agricultural surveys and military maps) | Each ministry through its own survey service under technical supervision by the Central Administration of Geodesy and Cartography and establishments subordinated to it. |
| VIII. CAPITAL REPAIRS | |
| 25. Capital repairs of housing | Ministry of Communal Economy |
| 26. Repairs in the state agricultural farms | Ministry of Agriculture |
| 27. Other repairs | Ministry which controls and exploits through its own construction-assembly enterprises or by the self-management economic system. |

Remark

The construction plan does not embrace the constructions carried out by the Ministry of National Defence on its own. This will be discussed in a later report.

C. The Advantages and Faults of the Classification System

The breakdown of the entire construction industry into these categories is so detailed that every investment project can be properly classified and thus it is automatically known which ministry is responsible for its implementation. In rare cases when an investment could be classified into one of two categories, e.g., a housing settlement (responsible Ministry, Construction) has to be built with a new street,

streetcar line and sewer system (responsible Ministry, Communal Economy) then the State Economic Planning Commission makes an arbitrary decision. In general, the main type of construction is decisive for assignment of the general contractor.

One of the advantages of this system is that the contractor generally knows what kind of construction works awaits him in the next year. The investor knows also who will be his partner-contractor and he can, during the planning stage, coordinate on various problems which may have an influence on construction methods. Therefore only in rare instances is some enterprise surprised by an investment project unknown in advance. More often it happens that an investment project is left out of the construction plan because of shortage of state credits or the necessity to reduce the national investment plan ordered by the government, etc.

The second advantage of the classification is the simplicity and clarity. As a matter of fact all this allocation of investment construction tasks among the ministries is done by three or four officials of the Construction Department of the State Economic Planning Commission. Sometimes dubious problems arise, e.g., an investment project is small and the construction enterprise does not like to accept the order, in such cases PKPG makes the decision in agreement with both ministries involved (the investing and constructing ministry) e.g., by transferring the project to the self-management economic system which means that the investor must build the project himself.

The third advantage is that the allocation of a state contractor means also the automatic allocation of building materials, because the contracting ministries receive at the same time the entire pool of materials necessary for their yearly plans. The fact of accepting an order from the investor means that the constructing enterprise will supply the necessary building materials and is responsible for the implementation of the project, the labor, and equipment.

The main fault is that the investor cannot select the contractor. For example, if a factory is built in Zielona Gora, it is almost certain that this project will be allocated to a construction enterprise in Zielona Gora although it is well known that this particular enterprise does not have qualified engineers, that it will be not able to build it in the required time, etc. The investor can only complain and intervene with the Ministry of Construction and Building Materials Industry that necessary engineers and equipment be assigned to the construction enterprise.

While the allocation of construction task itself is simplified by the classification system, enormous work remains to be done in the preparation of balance sheet of materials (Department of Construction Planning Commission coordinates with the Materials Accounting Department), the preparation of the balance sheet of labor and bargaining for suitable obligatory

control coefficients (master standards)(wskazniki dyrektywne) which are included into the yearly national economic plan.

D. Balancing of deficits in the productive capacity

The balance sheet of the national investment tasks and productive capacity of the construction industry is not closed at once. There is usually a shortage of productive capacity; even if the shortage on the national level is small, e.g., about 8%, it may reach 20% and more in individual voivodships as happened in 1957 and in 1958 in the city of Lodz (city of Lodz is an independent administration equal to a voivodship). Besides that there can be a shortage in some branch of the construction industry, e.g., shortage of installation productive capacity greater than that for the entire construction industry.

The balancing of the production capacity with the tasks is conducted in the following way:

The State Economic Planning Commission as a rule increases the obligatory control coefficients. A control coefficient is nothing else than a required (and ordered to be implemented) master standard of productivity, use of material per unit or production costs, for the given year. It is well known on the basis of experience, statistical data, calculations and comparison with foreign countries, for example, that the yearly output of one worker in housing construction amounts, according the the Polish Statistical Yearbook 1957, page 200, to:

The value of basic construction-assembly production for one worker in 1956, in 1956 prices:

| | | |
|---|---|---|
| in housing construction | 75,086 | zloty |
| in industrial construction | 85,051 | " |
| in engineering construction | 77,767 | " |
| in agricultural land improvement | 48,635 | " |
| in assembly work | 95,669 | " |
| average in the entire construction | 75,920 | " |

* because cost of materials and machines is included.

These are the output of workers employed in the basic production, excluding nonproducing workers, assigned to auxiliary services, etc. For that reason the average output of one worker is much lower, about 15 to 20%.

~~See page 71-73 Chapter A, part II.~~

The State Economic Planning Commission by arbitrarily increasing the required output for the next year, e.g., by 3.5%, is able to balance larger investments without increasing the labor force.

In the same way, PKPG increases the tasks of saving building materials for a production unit each year; in other words it tightens the norms of use of materials. For example, it ~~decreases~~ decrees that the use of auxiliary timber (used for scaffolding and other purposes on the building site) for 100 cubic meters of housing construction must be cut down from 0.06 cubic meters to 0.05 cubic meters and in this way balances the shortage of materials on paper. The reason for such a cut is that it is known that a

lot of timber is wasted on the building sites, and that it is certain that this amount of timber can be saved.

Independently the PKPG provides for a part of the difference by increasing the wages fund and funds for recruitment, thus allowing an increase in the number of workers. It also increases the allocation of materials, if the increase of building materials production planned for the next year permits it to do so.

The ministries fight against the increase of the obligatory control coefficients and higher master standards. They indicate that the mutual relation of the various types of construction work (basic construction, installation and assembly) does not change, that they have a larger percentage of earthwork which reduces the output for one worker, or that they have to organize a great number of new construction projects which consumes time and reduces productivity, that the experienced bricklayers leave the construction enterprises and start private work and for that reason the construction enterprises must spend more money for training new workers whose output will be anyway lower, etc. At the end of these long bargainings, the final construction plan emerges containing the list of allocated construction projects and works (portfolio of works) and obligatory master standards.

A lot of energy is used for quarrels and disputes about master standards, but these negotiations have no influence on the date of the start of individual projects, because this is beyond discussion, or on the allocation of the contractor because the investor has no say in this respect.

Another fault of this system is that all these discussions are about integrated coefficients and standards for the entire country, for the entire construction industry, or ministry, or central administration, but not for individual construction projects, or individual concrete estimates. For that reason these coefficients are more or less correct on a large scale of the country, ministry or a branch of construction industry, but are not always pertinent to an individual construction project during the next year. The employees of the construction industry used to say that these coefficients are as true for the entire ministry as the official statistics which indicate that every fifth man in the world is a Chinese.

On the other hand, the Construction Department of PKPG fights with other PKPG departments for an increase of its labor force, for credits for its own investments, for allocation of housing, trucks and automobiles, and, with Ministry of Finance, for an increase of working capital and longer periods for accounting of working credits, for increase of stocks of building materials, and so on. All these conferences continue for a long time and the final national Construction Plan is usually not approved until February or March of the current production year. During the first quarter of a current year the construction enterprises work on the basis of temporary standards. In 1958 a so called construction year (rok budowlany) was introduced beginning 1 April, which differs from the budget year. This change is also convenient for the industry ~~from~~ for climatic-seasonal reasons.